



MUSIC IN THE DIGITAL AGE

INTERNATIONAL CONFERENCE | DIGITAL TECHNOLOGIES AND ARTISTS' RIGHTS

ATHENS, OCTOBER 22-24, STAVROS NIARCHOS FOUNDATION CULTURAL CENTER

EXECUTIVE SUMMARIES

Music in the Digital Age: Streaming & Artificial Intelligence has been a three-day international forum organized by APOLLON (Greek CMO for musicians' neighboring rights) and FIM (International Federation of Musicians). Against the backdrop of **AI-generated content and the dominance of streaming platforms**, the conference examined how **revenue models, legal frameworks and artistic labor are being reshaped** in a digital economy that prioritizes scale over sustainability.

Bringing together artists, journalists, industry professionals, legal experts, academics, policy makers and technologists, the event focused on three core questions:

- How to build **sustainable and equitable compensation** models in a saturated streaming market?
- How to protect creators' rights when **AI is trained on and competes with their work?**
- What role should legislation play in **securing ethical AI and fairer digital markets** without stifling innovation?

The second and third days were dedicated to Artificial Intelligence in the entertainment sector, covering both industry and creator perspectives, and culminating in legislative proposals for regulating this rapidly developing technology.

A. AI | THE MECHANICS OF ARTIFICIAL INTELLIGENCE

This opening session established the technical and philosophical groundwork for the conference's two-day exploration of Artificial Intelligence. It featured a keynote address by pianist and researcher **Pavlos Antoniadis** (IRCAM/Ioannina University), followed by a technical panel moderated by **Benoit Machuel** (FIM), featuring **Yiannis Stathopoulos** (Microsoft) and **Dimitris Kalocheretis** (Apollon CMO).

1. Key Themes & Discussions

The session aimed to demystify the "black box" of AI for a non-technical audience of musicians and legislators. It juxtaposed two distinct narratives: an **industry perspective** focused on the scalability, efficiency, and inevitability of Generative AI, versus an **artistic/academic perspective** arguing for a human-centric, embodied approach to AI that resists industrial standardization.

1.1. The Mechanics of "The Black Box" (Input/Output)

- **Training & Encoding:** The panel confirmed that AI does not "hear" music but converts it into **numerical representations (tokens/vectors)**. Once ingested, **the original musical artifact is effectively "thrown out," leaving behind only probabilistic parameters.**
- **The Prompt:** The "prompt" was identified as the new locus of control. Industry speakers argued that the quality of output depends entirely on the user's ability to instruct the model, **shifting the skill set from musical execution to managerial direction.**
- **Infrastructure:** The explosion of AI is driven by hardware advances (GPUs) rather than software breakthroughs alone. This has created an **exponential demand for energy**, with data centers now requiring power at the scale of nuclear reactors.



1.2. The Conflict of Definition: Tool vs. Agent

- **Industry View:** Stathopoulos and Kalocheretis framed AI as a **neutral “tool” or “instrument”**, arguing that liability remains with the “human in the loop”. They emphasized democratization and collaboration.
- **Artist View:** Machuel and audience members expressed anxiety over AI as an **“omniscient expert” or “stowaway student”** that extracts human value without consent. Antoniadis warned of **epistemic violence**, where the embodied, social nature of music is stripped away by statistical modeling.

1.3. Irreversibility and Control

- **Unlearning:** The panel reached a consensus that “unlearning” (**removing specific copyrighted works from a trained model**) is **technically impossible**. The only available remedy is “fine-tuning”—adding a filter to mask specific outputs—rather than erasing the source knowledge.
- **Guardrails:** The industry solution to copyright and ethics concerns is **reactive** (AI monitoring AI) rather than **proactive** (changing the architecture), admitting that total control over “home-brewed” or open-source models is impossible.

2. Conclusions

- The session revealed a profound ontological gap between the technological and creative sectors. The industry panel operated within a logic of Computational Capitalism, treating **music as data to be cleansed, processed, and monetized**. In contrast, the keynote provided a critique based on Critical Data Studies, arguing that **current AI models suffer from deep epistemic biases** because they cannot capture “tacit knowledge”, the embodied, shared experience of music-making.
- While the technologists advocated for “solutionism” (fixing AI flaws with more AI, such as guardrails), the academic perspective suggests that the problem is foundational. The architecture of Deep Learning itself relies on **temporal violence** (freezing past data to predict the future) and **epistemic violence** (reducing cultural artifacts to math). The consensus on the impossibility of “unlearning” confirms a form of **technological determinism**: once creative labor is metabolized by the algorithm, it cannot be reclaimed, only managed.

3. CALLS TO ACTION

- **For Legislators:** Recognize that "unlearning" is a technical impossibility. Future regulations must focus on consent at the point of ingestion (input), as remedies at the output stage (fine-tuning) are insufficient to protect rights.
- **For Musicians' Unions:** Shift the narrative from "AI as a tool" to "AI as a labor displacement mechanism." The industry's admission that "human in the loop" might eventually become obsolete requires immediate policy protections for human creative labor.
- **For the Tech Industry:** Move beyond "black box" architectures. There is a verified demand for "Explainable AI" (as proposed by Antoniadis/IRCAM) that prioritizes real-time human interaction and causality over massive, opaque data scraping.
- **For Environmental Policy:** Address the ecological cost of Generative AI. The exponential energy demand (requiring nuclear power) must be weighed against the societal value of the synthetic content produced.

B. AI | HOW ARTIFICIAL INTELLIGENCE WILL SHAPE OUR LIVES

The 2nd session on AI focused on creativity, authenticity, and ethics. **Dr. Irene Stamatoudi** (University of Nicosia), presented a case study regarding artist Damien Hirst's plan to have his works created for 200 years after his death, as an introduction to the central themes, discussed by a panel consisting of **Jean-Gabriel Ganascia** (Sorbonne University) and **Rodrigo Alberto Carazo Zeledón** (UN Human Rights Committee).

1. Key Arguments & Perspectives

The panel discussed the nature of authorship and authenticity in the age of AI, the limits of copyright law, the application of moral rights and the ethical implications of non-human creation.

1.1. Philosophical and Historical Context (Prof. Jean-Gabriel Ganascia)

- Professor Ganascia positioned AI not as a new phenomenon of "machine creativity" but as the latest development in a **long history of using technology as a tool for art**, dating back to the 19th century.
- He argued that generative **AI lacks autonomous initiative or will**, and its output is contingent on human-crafted prompts.
- He drew a crucial distinction between the potential for genuine artistic expression using AI as a new instrument and the **economic threat** posed by the entertainment industry's use of AI to reduce costs and devalue human creative labor.
- **He concluded that the primary challenge is economic and structural, not the "end of art".**

1.2. Human Rights and Ethical Framework (Rodrigo Alberto Carazo)

Mr. Carazo argued that the discourse around AI must be grounded in **human rights and ethics**.

- He cautioned against a **"speed-led process"** driven by profit, advocating instead for a **"value-led process"** that prioritizes human dignity, privacy, and fair compensation.
- He articulated the principle **"from needs to rights,"** stating that the fundamental need of creators to be protected and compensated for their work must be translated into legally enforceable rights.
- The core ethical task, he argued, is to "keep being human" and **ensure technology serves humanity with a distributive goal**, rather than concentrating wealth and power.

1.3. Legal and Practical Challenges (Dr. Irene Stamatoudi & Audience)

The discussion highlighted concrete legal and market challenges as:

- the **unauthorized use of existing creative works to train AI models**, which was identified as a primary threat to performers and authors.
- The panel and audience debated **whether AI-generated output should receive copyright protection** at all, with the overwhelming sentiment from the creators present being negative.
- The problem of market saturation was underscored with data from the music platform Deezer, indicating that **a significant percentage of new content is already fully AI-generated**, threatening to drown out human artists.

2. CONCLUSIONS

- The panel concluded that while AI offers novel tools for creation, its current trajectory **poses a severe threat to the creative ecosystem**.
- There was a consensus that the central conflict is not between artists and AI, but **between human creators and the tech/entertainment industries** deploying AI in ways that infringe on rights and undermine economic viability.
- Key takeaway was the **urgent need for proactive legislation** to govern the use of **training data**, a re-evaluation of copyright principles to protect human creators (focusing on the person, not just the work), and
- the establishment of **ethical frameworks** to ensure technology is developed and deployed in a manner that is fair, transparent, and human-centric.

C. AI | OPPORTUNITIES & BENEFITS FOR MUSIC CREATORS

This session provides a comprehensive exploration of the impact of Generative AI on the music industry, featuring a keynote address by Professor **Anastasia Georgaki** (Athens University) followed by a panel discussion with industry experts **Bertalan Temesi** (MZTSZ), **Steve Levine** (music producer), and **Vasilis Ginos** (APOLLON).

1. Key Problems Identified

The panelists addressed the dual nature of Generative AI in the music industry, identifying it as both a source of **powerful creative tools** and a significant **economic and ethical threat to music creators**. The discussion highlights the urgent need for a robust regulatory and ethical framework to manage its integration.

- **Economic Threat:** The proliferation of AI-generated content on streaming services is **diluting the royalty pool**, leading to a significant loss of income for human artists under the pro-rata distribution model.
- **Copyright & Training Data:** AI models are being trained on vast amounts of copyrighted music without **consent, compensation, or transparency**, creating a "black box" that makes legal challenges difficult.
- **Cultural Threat:** Training datasets are heavily biased towards Western commercial music, posing a **serious risk to global musical diversity** and the preservation of niche and traditional genres.
- **Devaluation of Artistry:** AI's inability to replicate genuine human emotion, expressivity, and improvisation threatens to **devalue the unique contributions of human artists** and could lead to a future where audiences are conditioned to accept synthetic, soulless music.

2. Conclusions

While AI-assisted tools offer clear benefits to workflow and creativity, **the unchecked proliferation of fully AI-generated content presents an existential threat**. Immediate and collaborative action from artists, governments, and industry bodies is required to establish control and **ensure that AI serves as a partner to human creativity, not a substitute for it**.

3. PROPOSED SOLUTIONS & ACTIONS

- **Regulation & Legislation:** Panellists unanimously called for **government intervention to regulate tech companies**, enforce transparency in training data, and protect artists' intellectual property.
- **Mandatory Labeling:** A consensus emerged on the necessity of **clear and consistent labeling for all AI-generated content** to ensure consumer awareness and allow for market-driven choices.
- **Industry Self-Regulation:** The actions of professional rights organizations, such as the UK's PRS denying registration to purely AI-generated music, were cited as a crucial step in **disincentivizing the replacement of human creators**.
- **Technological Solutions:** The potential of emerging technologies like blockchain-based smart contracts was raised as a possible avenue for ensuring **direct and transparent compensation** for artists whose work is used by AI systems.

D. AI | DEMONSTRATIONS OF AI CREATED/ASSISTED WORKS

In these demo sessions, AI-created/assisted works emerged as **human-led projects**. Machine systems extend, rather than displace, musical authorship, whether in the studio or on stage. Together, they sketched a continuum from workflow augmentation (restoration, arrangement, mastering) to interactive, improvisational co-creativity, keeping **human intention, curation, and responsibility at the center**.

1. Steve Levine: AI in the recording studio

AI-created/assisted works appeared in Levine's session as **studio practices** where AI enhances access, speed, and creative options without displacing the producer's role.

- He first showed AI **stem-splitting** on a 1982 Culture Club stereo tape to recover usable instrumental stems, combining Logic's Stem Splitter with Re-stem to isolate vocals and individual drum elements from a mono source.
- He moved to Logic's Session Player, using **AI-generated drum, bass, and keyboard parts** as editable sketches:
 - parameters such as complexity, intensity, and style were shaped through musical controls and
 - outputs were converted to MIDI for detailed note-level editing rather than treated as finished compositions.
- He then centered on **AI-assisted mastering** with iZotope Ozone, where the system analyzed a mix, suggested processing chains (EQ, clarity, maximization), and intelligently **corrected problems** like floppy low-end while enhancing vocal presence. He stressed that this puts **high-quality mastering within reach of smaller studios** while preserving human control over taste and dynamics.
- In discussion, he extended the frame to **orchestral cues**. He noted the creative value of "happy accidents" when **unexpected AI sounds are embraced**, and mentioned workflows combining **text-generated MIDI** with rich instrument libraries, as well as support for **microtonal and non-Western instruments**, all reinforcing AI's role as a **powerful assistant inside a human-defined aesthetic framework**.

2. Gérard Assayag: human–AI co-creativity

Assayag’s session approached AI-assisted works through the lens of **human–AI co-creativity**, placing contemporary systems in a historical line from Descartes and Leibniz’s dreams of computable language to Ada Lovelace’s prediction that machines could compose arbitrarily complex music.

- He distilled this into **four moments**:
 - Greek foundational mathematics,
 - a 17th-century combinatorial machine worldview,
 - 19th–20th-century logical foundations, and
 - today’s biologically inspired neural models,
 to argue that current AI realizes an old ambition to compute aspects of creativity while also raising fresh questions about agency.
- At the practical core was **SOMAX II**, an IRCAM system whose listening, learning (latent “imagination”), and interaction modules together aim to make AI an **improvising partner** rather than a command-response tool.
- In the live, unrehearsed performance, guitarist Tilemachos Mousas played with SOMAX, which had been **pre-trained on a corpus but had not rehearsed** with him; as he played, the system listened, drew responses from its latent space, and entered into an evolving musical dialogue.
- Assayag acted as a **human conductor**, activating and deactivating AI “players” and adjusting parameters like reactivity and inertia to ensure that the machine’s behavior remained **musically expressive** rather than mechanically generative.
- The result was framed as **co-evolution**: human and machine continuously influenced each other’s ideas, producing music that neither could fully script, and positioning AI as an **extension of human creativity** that introduces surprise and emergent structure within a human-led performance ecology.

3. Overarching implications

Across both sessions, AI-assisted works emerge as **human-led projects** where machine systems materially shape sound (through restoration, sketch generation, mastering, or improvisational response) without supplanting human authorship or responsibility.

- **In Levine's studio examples**, AI provides sophisticated **scaffolding**: extracting stems from archival recordings, generating editable rhythmic and harmonic foundations, and proposing mastering chains, while producers decide what to keep, how to edit, and when a track is finished.
- **In Assayag's live setting**, AI's improvisations are bounded and curated by human performers and conductors, so that authorship emerges from a feedback loop but remains anchored in **human design, oversight, and performance practice**.

4. CONCLUSIONS

- For discussions of AI-created or assisted works, these sessions implicitly support frameworks that continue to locate rights and accountability with human creators, even when AI tools are deeply embedded in the production chain.
- They also point out how AI's deployment may be crucial for classifying works and for drawing normative and legal lines between AI as infrastructure, collaborator, or independent originator. (Workflow augmentation, co-improvisation on stage, versus unsupervised autonomous generation).



E. GENERATIVE AI | THE INDUSTRY PERSPECTIVE

Moderated by **Beat Santschi** (SMV-USDAM), this panel offered the industry viewpoint with speakers **Antigoni Papanikolaou** (Microsoft), **Alexandru Calugar** (The Soul Group), **Graham Davies** (DiMA), and **G rard Assayag** (IRCAM). GenAI was framed as a collaborative "Copilot" which, through responsible industry-led development, new partnerships, and adherence to legal frameworks, will ultimately amplify rather than supplant human artistry.

1. Key Themes and Arguments

The industry session portrayed generative AI as an innovative "Copilot" that assists, rather than replaces, human creativity. Speakers highlighted a proactive approach focused on responsible development, new partnerships, and revenue opportunities. They asserted that the industry is building a balanced ecosystem through new tools and legal compliance to ensure technology amplifies human artistry.

1.1. AI as a Tool to Amplify Creativity and Preserve Culture

Microsoft highlighted that AI is a tool that works alongside humans, citing examples like The Beatles using AI to restore John Lennon's vocals for a new track. They positioned AI as a driver of growth, projecting it could add 8 million jobs and **contribute significantly to the global creative economy**, similar to how home video and digital platforms previously opened new markets.

1.2. Commitment to Responsible AI and Creator Control

A central theme was the industry's commitment to ethical AI development. Microsoft detailed its "Responsible AI Standard" built on principles of **Fairness, Transparency, and Accountability**. They presented several tools intended to give rights holders control:

- **Bing Webmaster Controls & "robots.txt"**: Respecting standard internet protocols that allow publishers to signal a "do not crawl" preference for their content.
- **Exclusion of Pirated and Paywalled Content**: Asserting that their models are not trained on works from pirate sites or behind paywalls without explicit agreements.
- **Prompt Blocking**: Giving living artists the option to block their names from being used in image generation prompts to prevent "style of" imitations.

1.3. New Partnership and Monetization Models

The industry speakers pointed to new business models. Microsoft cited its partnerships with creators and publishers to **license content for training** and its "Copyright Commitment" to indemnify commercial customers. Alexandru Calugar (The Soul Group) noted that while generic content is declining, **the "creator economy" is growing**, positioning authentic human creators as the true "stars" who cut through the noise.

1.4. The Importance of Metadata and a Functioning Supply Chain

Graham Davies (DiMA) stressed that the success of the digital ecosystem relies on **high-quality metadata**. He advocated for industry-wide standards (like the "Credits Due" initiative) to ensure proper attribution and payment. This includes developing **nuanced labeling for AI-assisted works**, distinguishing them from purely AI-generated content, to **align with copyright office guidance** and award eligibility rules (e.g., the Grammys).

1.5. Open Research as a Driver of Progress

G rard Assayag (IRCAM) provided a perspective from a public research institution, explaining how foundational, open-source research on human-machine interaction (co-creativity) is often adopted and scaled by Big Tech. He noted that while industry has immense resources, open research is vital for tackling universal problems and ensuring that **progress is shared back with the community**, ultimately benefiting everyone.



2. CORE POSITIONS AND PROPOSED ACTIONS

- **Framework of Responsible Development:** Adherence to internal ethical standards and development of creator-controlled tools is the preferred method of governance.
- **Market-Based Partnerships:** The industry is open to and actively pursuing licensing deals with rights holders for content used in training.
- **Emphasis on Existing Legal Tools:** The industry operates within the existing legal frameworks, such as copyright exceptions for text and data mining (TDM) and fair use.
- **Labeling and Transparency:** There is support for developing nuanced industry standards for labeling AI's role in a work, allowing consumers to be informed and ensuring proper attribution.
- **Focus on the Creator Economy:** The market will naturally reward unique, human-centric content, making true creators more valuable than ever in a saturated landscape. The solution lies in empowering these creators to stand out.



F. GENERATIVE AI | THE CREATORS' PERSPECTIVE

Featuring an opening speech by **Yiorgos Andreou**, a keynote from **Chris Castle** (Artists Rights Institute) and speakers **Patricia Riera Barsallo** (AISGE), **Marc Du Moulin** (ECSA), as well as Andreou and Castle, this session, moderated by **Ioan Kaes** (AEPO ARTIS), delivered a powerful and unified consensus, framing the unregulated development of generative AI as an existential threat for artists.

1. Key Themes and Arguments

The second session presented a unified and urgent stance from creators and their advocates, framing the current unregulated development of generative AI as **an existential threat to human artistry** and a form of **mass intellectual property theft**. The consensus was that Big Tech's approach constitutes a **deliberate and large-scale infringement that requires immediate, robust legislative and contractual intervention**. The situation was characterized not as a negotiation but as a "street fight" for the future of creative professions and culture itself.

1.1. The Infringement Has Already Occurred

It was argued that the debate should not be about future use, but about **remedying the massive, unauthorized scraping of copyrighted works** that has already taken place. Chris Castle asserted that AI labs' reliance on "fair use" is an implicit admission of infringement, as "fair use" is an affirmative defense against such a claim. This unauthorized ingestion of data from the entire internet, including pirate sites, was labeled as **"theft"**.

1.2. Rejection of "Opt-Out" in Favor of "Opt-in"

Panelists universally **condemned the "opt-out" model** proposed by tech companies and embedded in frameworks like the EU's TDM exception. They argued it is an absurdly **complex and impractical** system that wrongly places the burden of protection on the creator. The only acceptable path forward is a **mandatory "opt-in" system**, requiring explicit, prior **consent and fair remuneration** before any work is used for training an AI model.

1.3. Beyond Copyright: Protecting Personhood and Artistic Identity

The discussion stressed that **the threat extends beyond copyright infringement.**

- **Personality Rights:** Performers' voices, images, and likenesses - their "working tools" - are being replicated without consent, directly replacing jobs in sectors like voice acting and dubbing.
- **Moral Rights:** The right to protect the integrity of a work and the right of attribution are gaining new importance as AI generates content that mimics, distorts, or falsely attributes work to human artists.
- **Style and Persona:** The use of "style prompts" (e.g., "a guitar solo in the style of Eric Clapton") was cited as proof of AI developers' intent to commercially exploit an artist's unique, un-copyrightable identity and persona.

1.4. The Ethical and Civilizational Threat

Yiorgos Andreou framed the issue in humanistic terms, arguing that allowing AI to imitate the creative process is a form of "**deliberate plagiarism**" that devalues art from a profound "work of art" into **mere "content."** He warned that substituting core human qualities with a "mathematical array" threatens a "peculiar Auschwitz" where **creators are rendered economically obsolete and morally exterminated** if a machine can do their job cheaper.

1.5. Unfair Market Competition

AI-generated content creates a **dual economic threat:**

- It competes directly with human-made music on streaming platforms, potentially **diluting the royalty pool** shared by human creators.
- It is often marketed as "royalty-free" background music for businesses, directly **undercutting the licensing market** that sustains collective management organizations and their members.

2. CORE POSITIONS AND PROPOSED ACTIONS

- **Transparency and Accountability:** AI developers must be legally compelled to disclose all works used to train their models.
- **Consent and Remuneration:** An explicit "opt-in" framework is non-negotiable. Fair, collectively managed remuneration must be established for both the "input" (training) and "output" (generated content).
- **A Retroactive Remedy:** Since the infringement has already happened on a massive scale and models cannot be "untrained," a retroactive financial solution is necessary to compensate creators for the past unauthorized use of their work.
- **Strengthened Legal Protections:** Legislation must go beyond copyright to protect personality rights (voice, likeness) and strengthen moral rights to prevent unauthorized imitation and distortion.
- **Exclusion from Creation:** A strong position was taken that AI should be a tool for human creators, but it should not be permitted to generate "original" works of art that compete with human creations.

G. GENERATIVE AI | POTENTIAL LEGISLATIVE SOLUTIONS

Following video interventions from **Gadi Oron** (CISAC) and **Tilo Gerlach** (AEPO ARTIS), and a keynote from **Yiannis Maragoudakis** (APOLLON), this final panel, moderated by Maragoudakis, brought together global legal and policy experts: **Roberto Mello** (ABRAMUS), **Konstantinos Christodoulou** (University of Athens), **Xavier Blanc**, **Pál Tomori** (EJI), **Ben Kessler** (AFM), and **Marcos Alves de Souza** (Brazilian Ministry of Culture).

1. Context and Synthesis

Pivoting from the conflicting narratives of industry innovation and creator outrage, the final session served as the conference's pragmatic and urgent climax. It systematically dismantled the industry's arguments for self-regulation and presented a unified legislative battle plan.

2. International Environment

The CISAC "Triptych": **Gadi Oron** (CISAC) clarified via video that using works without license "is not training, it is theft." He presented the three-pillar legislative framework: **Transparency, Consent, Remuneration**, citing the Swedish (STIM) example as proof that transparency is technically feasible.

The "Private Copying" Model: **Tilo Gerlach** (AEPO ARTIS) argued that individual licensing is impossible. The solution lies in a system analogous to "private copying": an **unwaivable remuneration right** under mandatory collective management, for both the training (input) and the result (output) of AI.

The "Brazilian Initiative": **Marcos de Souza** and **Roberto Mello** reported that Brazil is moving unilaterally on legislation, ignoring WIPO's delays. Their bill provides for remuneration, **prohibits rights "buy-outs"** for AI, and has extraterritorial power over platforms operating in the country.

Legislative Action in the USA: **Ben Kessler** (AFM) analyzed bipartisan efforts in Congress, such as the **"No Fakes Act"** (for deepfakes) and the **"Protect Working Musicians Act"** (allowing independent artists to bargain collectively, bypassing antitrust laws).

The Failure of TDM in the EU: **Xavier Blanc** and **Pál Tomori** agreed that the EU's TDM (Text and Data Mining) exception is **"badly written legislation"** not designed for Generative AI, rendering the "Opt-Out" system inadequate.

3. Consent, "Opt-Out," and the "Unlearning" Fallacy

The core of the legislative debate revolves around the irreconcilable **models of consent**:

- On one side is the creator-demanded **"opt-in" system**, a cornerstone of intellectual property law requiring explicit, prior permission for use.
 - On the other is the industry-preferred **"opt-out" model**, which assumes permission is granted for all data unless a rights holder explicitly objects.
- Speakers in this session fiercely criticized the "opt-out" framework as a betrayal of fundamental legal principles. It was argued that it **violates the Berne Convention's principle of "no formality"** by forcing creators to take action to protect their inherent rights. More critically, it places an impossible **administrative burden on individual creators and their CMOs** to constantly monitor and declare objections to countless AI platforms worldwide.
 - This leads directly to the "unlearning" fallacy: even if a creator successfully opts out, their work has likely already been ingested into a model's foundational data. Speakers questioned the technical feasibility of forcing a machine to "unlearn" or purge specific data from its complex neural network. **If unlearning is impossible, any opt-out becomes legally hollow**, offering no retroactive remedy for the initial infringement.

The "opt-in" vs. "opt-out" debate represents a **classic clash between established property rights doctrine and the tech industry's push for a new paradigm of data exceptionalism**. Legally, "opt-out" shifts the default from "prohibited unless permitted" to "permitted unless prohibited," a **radical departure from copyright norms**. The "unlearning" issue creates an unprecedented evidentiary challenge for legal systems. How can a court verify that a model has truly "forgotten" infringed data? Without a clear technical and auditable process for unlearning, any legal remedy based on it remains largely theoretical, reinforcing the creators' argument that **financial compensation for past ingestion is the only practical solution**.

4. APOLLON's Legislative Framework

Yiannis Maragoudakis (APOLLON), delivering the keynote, after showing the inability of the market to self-regulate, presented a detailed **legislative framework** to ensure rightsholders' rights, based on three pillars: **Remuneration, Consent, Transparency.**

4.1. Unwaivable Remuneration Right & Resource Redistribution

Recognizing the impossibility of **mass individual licensing**, the dominant solution is the **introduction of a licensing fee or an unwaivable equitable remuneration right, under mandatory collective management.**

- **Input Levy:** An equitable remuneration payable by AI platforms for machine training. It was proposed that this be **distributed in equal shares among all rights holders**, as the contribution of each work to training is theoretically equal.
- **Output Fee:** A distinct fee based on tariffs from end-users (e.g., streamers, broadcasters) for the commercial use of AI products, distributed based on market shares.
- **The Break with 50/50:** A radical proposal was made to abolish the traditional 50/50 split between producers and performers in neighboring rights, moving to a distribution of **1/3 for each category** (Producers / Musicians / Singers).

4.2. Reversal of Burden of Proof & Rebuttable Presumption

A critical legal strategy for empowering creators. Legislation must establish a **rebuttable presumption**, whereby the burden of proving non-infringement **lies with the AI platform**, not the creator. This corrects the massive information asymmetry and relieves creators of the prohibitive cost of musicological expertise for every infringement.

4.3. Mandatory Watermarking & Metadata

To enable any functional system of transparency and distribution, regulation must mandate a **digital watermark on all AI-generated outputs.** This watermark must contain machine-readable metadata that identifies all original works used in the output's creation and, if possible, the percentage of their influence.

The proposed framework leverages recognized **legal tools for managing "uncontrollable markets."** The levy system is a classic solution where tracking individual use is impossible. Reversing the burden of proof is a standard judicial tool applied in cases of information asymmetry to level the playing field. The call for mandatory technical standards like metadata-rich watermarks reflects a modern approach to regulation, where **legal obligations are embedded within the technology's architecture ("compliance by design")** rather than being applied only after a violation has occurred.

5. CONCLUSION AND GLOBAL CALL TO ACTION

- Speakers framed the current situation not as a technological evolution to be accommodated, but as **a crisis requiring immediate and forceful legal intervention** to correct a massive market failure and prevent what was repeatedly termed **"the greatest theft in the history of humanity."**
- The session resoundingly concluded that **market self-regulation has failed**, making binding legislative action - built on the non-negotiable pillars of **transparency, consent, and remuneration** - the only viable path forward.
- The session concluded with an **urgent call** for national governments to act decisively, citing Brazil's bold legislative initiative as a model. The economic threat - a potential €4 billion annual loss to music creators by 2028 - was presented as a clear and present danger.
- The consensus is that **without immediate, strong, and binding legislation to enforce transparency, consent, and remuneration, the professional creative ecosystem faces an existential crisis.** Legislators are now being called upon to choose between protecting human culture and subsidizing a new wave of technological giants.